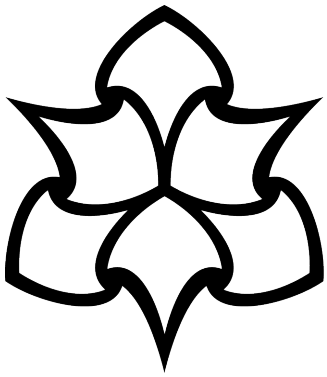

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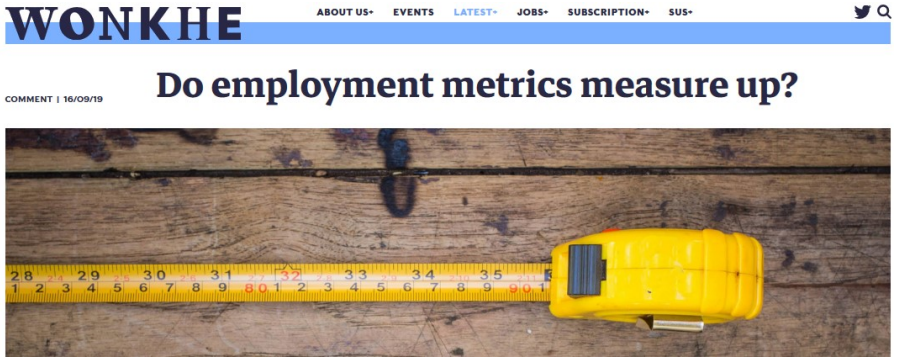
Transforming Student Aspirations: Embedding 5-year Plans in the Curriculum

Dr Lindsey J. Munro, Janet Marshall,
Dr Lisa Coulthwaite & Dr Fiona Saunders
Faculty of Science & Engineering

29 January 2020

Employability Agenda is A Contested Space in HE

VS



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TEF Landscape: Graduate Outcomes | LEO

TEF Metrics - Employability:

- **DLHE / Graduate Outcomes (6 / 15 months after graduation):**
  - Employment after the course
  - Graduate level employment

- **LEO:**
  - Sustained Employability
  - Above Median Earnings after 3 years

- **TEF Gold:**
  - Need excellent graduate outcomes + aspirations for promotions
  - All of us our working to improve our students prospects

[redacted]

What are the barriers to getting the graduate careers they are capable of?

Barriers for Students → Graduate Careers

Fear

Not sure of options

Changed their mind

Confidence

Hoping their grades will improve

Experience

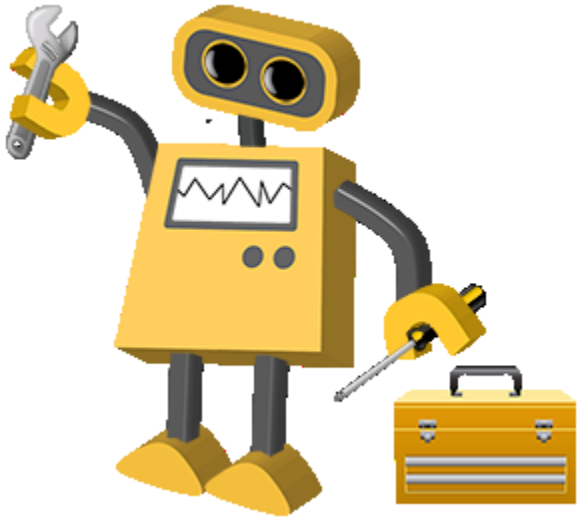
20% of graduates leave Grad Scheme by the 1st Year

Association of Graduate Recruiters (AGR) Development Survey 2017

BUT … The workplace is changing rapidly

“A Graduate Job”: The Robots are Coming

- **Challenges:** Industry 4.0 – automation, digitisation, real-time data
- By 2022, 54% of all employees will require significant re- and upskilling. (WE Forum, 2018)
- 65% of university students today will take up jobs that don’t exist
- **“Future proofed” Interdisciplinary Graduates:**
  Important to develop a range of skills
  Internet of Things Data Creative - Rewilding Strategist
  Virtual Habitat Designer – Bio hacker
  Independent – Rachael Pellis (2016)



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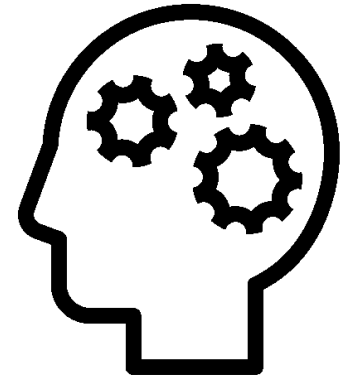
Employers Skills List: The Human Element

- **Specialist Skills:**
  Digital Skills Programming Business Awareness



- **'Human' skills:**
  Creativity Originality Initiative Innovation
  Persuasion Negotiation Resilience Flexibility
  Problem solving Critical thinking Attention to detail

- **Skills Gap:**
  - Only 23% of UK firms believe that a new graduate will arrive fully prepared
  - 49% find they lack interpersonal skills, 40% lack problem solving skills

- **Degree**: "Licence to Learn"

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What can Universities do to help students get suitable Graduate jobs?

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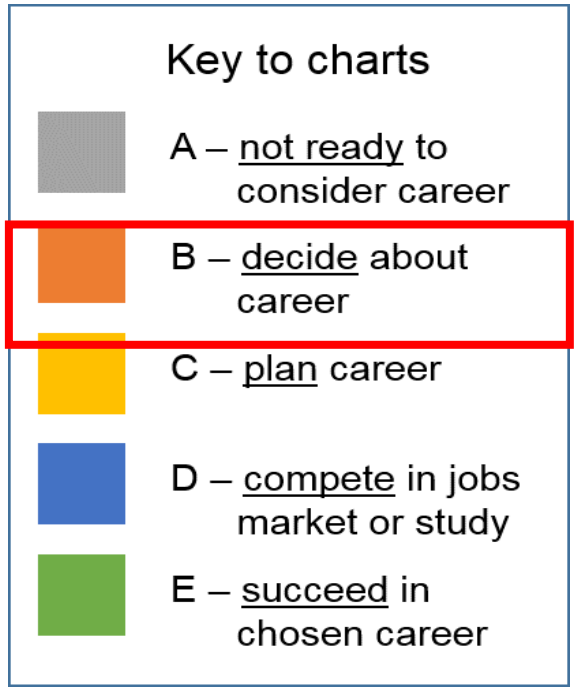
Science & Engineering - Employability

Strong Employability Focus → Improved DLHE

- Courses link to related careers
- Careers Workshops embedded in induction, units & throughout year
- 1-to-1 Support
- Meet the Employers Networking Events
- Careers Events

It's Not Enough → As an extra!

- Works for the students that:
  - Know what they want to do
  - Have families who can advise
  - Engage
  - Apply



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Teaching Employability Skills

Not just about teaching these [employability] skills but also about helping students realise that they have them and importantly can articulate them.
Proctor and Harvey, 2018

Engineering education should take a "Perspective on graduateness that recognises the significance of disciplinary knowledge but that also holds a space for the development of student agency"
Case and Marshall, 2016

Department for Education

Planning for success: Graduates' career planning and its effect on graduate outcomes

Research report

March 2017

Jan Shury, David Vivian, Catherine Turner, Christabel Downing – IFF Research

Those who had clearer plans were more likely to have reported positive outcomes two and a half years after graduation, with those whose main activity was working in a professional or managerial role or further study more likely to have had clearer career plans at an early stage than those who were in non-professional employment or were unemployed.

Department for Education Research Report, 2017, p17

Need to overcome pedagogical discontinuities within and across disciplines **Bingham *et al.*, 2015**

Nuanced approach to 5 year plans overcomes this

How can 5 Year Plans help students gain graduate jobs?

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A journey of a thousand miles begins with a single step.
Lao Tzu
#DAILYCALM
Calm


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5 Year Plans → Embedding into the Curriculum

- Start early (Year 1) → Focus on graduation by end of October (Year 3 / 4)
- Highlight Employability Milestones → Employers / Moodle
- Embed into curriculum → Unavoidable → Assessed
- Supported by Personal Tutors

5 Year Plan + Action Plan + CV

Year 1:
- **Explore Options**
- **Build Skills**

Year 2:
- **Apply for Work Experience**

Year 3 / 4:
- **Apply for PG / Graduate Jobs**

Workshops
Online Centre
Employer Events
Placements

Sci & Eng Extracurricular Award

5-Year Plan

Video: Janet Marshall & Dr Lisa Coulthwaite

Acknowledge:

- Career planning may seem daunting

Aim:

Have a strategy to:

- Notice & maximise any potential opportunities
- Develop your employability
- Map out realistic goals

Activities:

- Values & Motivations
- Skills Assessment (SWOT)

- Online Careers Centre:
  - Career Pulse
  - Tailored Programme for Year 1 - 4

5-Year Plan

Five Year Career Plan: Develop a long-term professional vision – what do you hope to achieve in 5 years?					
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Overall goal					
What do I need to do to achieve my goal?					
What support & resources will I need?					
What training & qualifications will I need?					

5-Year Plan → Personal Tutor Support

Five Year Career Plan: Develop a long-term professional vision – what do you hope to achieve in 5 years?					
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Overall goal	• **Explore Options** • **Build Skills**	• **Gain Work Experience (Summer or Placement Year)**	• **BSc:** Apply for Graduate Job / MSc / PG / PhD • **MChem:** Gain more Work Experience (Summer)	• **BSc:** Pass probation year + work out career path • **MChem:** Apply for Graduate Job / MSc / PG / PhD	• **BSc:** Promotion / More Experience • **MChem:** Pass probation year + work out career path

5 year plans in Life Sciences: Link to Third Term Opportunities

5 year career plans in Engineering: Led by Personal Tutors

5 year career plans in Chemistry: Workshops & Personal Tutors

Challenges Faced

- **Engaging Staff**
  - Experience of feedback on careers
- **Engaging Students:**
  - Graduation seems a long way off
- **What will you replace:**
  - Limited space in the curriculum

Lessons Learned

- **Careers Support:**
  - Make it easy → Clear expectations
  - Tailor to each subject & Year group
- **Provide Linked Opportunities:**
  - Sci & Eng Extracurricular Award
  - Work Experience (Visits | International)
- **Adapt & link to Real Experiences**
  - Feel prepared → Mock interviews

Benefits of Curriculum-Based Employability

As a University we have a wide range of excellent support & opportunities
→ Which we need <u>every student</u> to benefit from → Raise aspirations

Embedding 5-year Plans → Applications → Interviews in the curriculum:

- **<u>Essential part</u>** of their University experience
- Builds up their confidence & readiness
- Increases awareness of opportunities
- Helps with motivation → Progression

Staff Feedback:

"For the 1st time, Year 2 seem to have a really clear idea of what they want to do next."

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Connecting Employability for Students

Map Employability in the Curriculum

5 Year Plans

Career Preparation Workshops

Coaching to Build Confidence:
- Personal Tutors
- PALs
- Toastmasters
- Alumni

Online Resources:
- Careers Centre
- Newsletters

Opportunities:
- Science & Engineering Extracurricular Award
- Volunteering
- Meet the Employers Networking Event
- Extended 3rd Term
- Work Experience

Work Experience

Graduate Jobs

PG Study


Success
Curiosity
AMBITION
Purpose
Fearless
Adventure

Science & Engineering Employability Team

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Careers:

- Janet Marshall
- Marina Matosic
- Kirstin Burke
- Megan Sharifi
- Rebecca Hall
- Sarah Reith

Placement:

- Amy Dutton
- Katie Grantham
- Marie McGarvey
- John White (Business Dev)

Student Enrichment:

- Andrew Lenehan

Science & Engineering:

- Fiona Saunders (Faculty Head of Education)

- **Department Leads:**
  - Lisa Coulthwaite (Life Sciences)
  - Lindsey J. Munro (Natural Sciences)
  - Haydn Insley, Lisa Simmons, Carl Diver (Engineering)
  - Bob Cherry (Computing)
  - Lida Nejad (Mathematics)
  - Ben Ives (Sport & Exercise Science)

- **Placement Tutors:**
  - Scott Pedley (Biology)
  - Ian Ingram (Chemistry)
  - Hannah Matthews (Env Sci | Geography)
  - David Sawtell (Engineering)
  - Paul Marsden (Computing)
  - Killian O'Brien (Mathematics)